REMARKS

Claims 3-14 remain active in the case. Reconsideration is respectfully requested.

The present invention relates to a hair dye composition.

Claim Objections

The objection to Claim 6 is believed overcome by the amendment to Claim 6, which amendments include a change of dependency from Claim 3 to Claim 5. Entry of the amendments and withdrawal of the objection is respectfully requested.

Claim Amendment

Claim 3 has been amended to recite that the second pack formulation is acidic as supported by the disclosure of Table 2 on page 14 which shows phosphoric acid as a component of the solution with the solution having a pH of 3.5. Entry of the amended claim is respectfully requested.

Invention

The present invention is directed to a method of dyeing the hair by mixing a first pack formulation and a second pack formulation to the hair, wherein the first pack formulation is comprised of the following ingredients (A) to (D):

(A) ammonia or an ammonium salt	0.1 to 1 mol/kg,
(B) a carbonate with the proviso that said carbonate is other than an ammonium salt,	0.001 to 1 mol/kg,

(C) a water soluble salt of iron, 0.1 to 10,000 ppm,

(D) a chelating agent, in which the molar ratio of (A) to (B) ranges from 0.1 to 5 and the pH of the formulation ranges from 8.5 to 12, and wherein the second pack is comprised of an acidic hydrogen peroxide solution as an oxidizing agent. The applied mixed formulation dyes the hair, and then the applied mixed formulation is removed from the hair.

Prior Art Rejection

Claims 3-14 stand rejected based on 35 USC 103(a) as obvious over Massoni, U.S. Patent 6,187,058 in view of Chan et al, U. S. Patent 5,368,610. This ground of rejection is respectfully requested.

The Massoni patent is relevant to the present invention in that it discloses a method of dyeing the hair by the use of a two pack formulation in which one formulation is a developer phase that is an aqueous solution of an oxidizing agent such as hydrogen peroxide and the other formulation is a tint phase that is comprised of a variety of components including an alkalizer. However, the tint phase of the composition of the patent is quite different from the first pack formulation of the present claims.

A first significant difference is that, whereas the reference permits the use of virtually any known alkali that is used in hair treatment technology, which alkaline agents include carbonates and ammonia or ammonium salts, the first formulation of the composition of the present method requires a combination of (i) a carbonate compound with (ii) either ammonia or an ammonium salt in the specifically stated quantities and a molar ratio of 0.1 to 5. The patent, on the other hand, at column 4, lines 21-34, discloses that any one or more alkalizer(s) selected from inorganic and organic bases of a number of different types can be used to

basify the tint phase. There is absolutely no teaching or suggestion of a specific combination of ammonia or an ammonium salt with a carbonate (excluding ammonium carbonate) as the essential base component which basifies a tint phase.

With respect to the tint phase formulation described in the Massoni patent at page 2, paragraph 2, lines 1-3 of the discussion of the patent, the Examiner notes the use of quaternary ammonium salts at column 4, lines 35-45 in the tint phase with the inference that such are the same or equivalent to the ammonium salt requirement of the first pack formulation of the present claims. However, any attempt at correlating the quaternary ammonium salts disclosed by Massoni and the ammonium salt component of the first pack of the present invention is clearly incorrect, because the quaternary ammonium salts of the reference are used as hair conditioning agents, because they increase the lubricity of the hair by functioning as surfactants or hair conditioners (col 4, lines 40-43), and not as compounds which adjust the pH of the tint phase.

A second significant difference is that a water soluble iron salt must be used in the formulation along with a chelating agent which stabilizes the iron salt. No such ingredient of a complexed metal salt is taught in the reference as a component of the tint phase, although the presence of a chelating agent in the tint phase is taught at column 4, lines 47-50. It is noted that the Examiner observes the disclosure of a chelating agent at the top of column 3 of the patent. However, here the chelating agent is a component of the developer phase, and apparently is used to stabilize the non-metal salt containing developer phase of the composition. Moreover, neither of the two phases contains a metal salt component such as an iron salt. Accordingly, the two pack hair treatment composition of the reference does not suggest the two pack hair treatment composition of the present invention.

The deficiencies of the Massoni document are neither overcome nor improved upon by Chan et al. In the first place,. Applicants submit that the two patents are not properly combinable, because, whereas the Massoni patent at least describes a two component formulation of a developer phase and a tint phase, which phases are mixed at the time of application of the composition to the hair, Chan et al, on the other hand, basically discloses a single formulation for the oxidative dyeing of the hair in which the essential ingredients of a water soluble iron, cobalt, manganese or copper salt, optionally in chelate form, the two components of a conventional oxidizable primary intermediate and a coupling agent of an oxidation dye and a metal chlorite oxidizer are present. Such a combination of components in a single formulation is much different from the two pack formulation described by Massoni where separate formulations must be specifically prepared and are maintained separate up to the time of use. Thus, one of skill in the art would find no motivation, as the Examiner alleges, to selectively reach into the disclosure of Chan et al to specifically select an iron salt alone out of four different metal salts for incorporation into the tint phase of Massoni, where the tint phase of the reference contains no metal salt as a functional ingredient, in an attempt to arrive at the present invention. Note that Massoni clearly states at column 4, lines 56-59 that it is the combination only of a dye derived from its two precursors and the oxidizing agent which achieves the dyeing of hair.

An exception to the teaching of a single formulation is found in Examples 14 and 15 of the patent where two separate formulations are shown in which the oxidizer of the patent, which is sodium chlorite, is formulated in aqueous solutions of a neutral water solution in Ex. 14 and a basic aqueous medium (buffer C) in Ex 15 which has a pH of 9. It is significant to point out at this point that the sole oxidizer of chlorite ion taught by the reference is placed in

a neutral to basic solution, because it is only in such solutions that chlorite ion is stable. On the other hand, Massoni, in teaching a developer phase that contains a peroxy compound such as, preferably, hydrogen peroxide (col 3, lines 1-7), clearly teaches acidic hydrogen peroxide solutions as is evident from the four developer phases D1 to D4 taught in the table at the bottom of column 5. In fact, chlorite ion is not stable in acidic solutions. This teaching is consistent with the disclosure of the present application of an acidic solution of hydrogen peroxide that is shown in Table 2 on page 14 of the present specification. Thus, the two references can not be reasonably combined to suggest the present invention. Accordingly, for the Examiner to assert as he has on page 4, lines 3-7 that the skilled artisan would find it obvious to reach into Chan et al and select an iron salt only as a metal compound and add it to the tint phase of the composition of Massoni is a clear indication of using the teachings of the present invention in hindsight to modify the composition of Massoni to arrive at the present invention. Such reasoning is clearly improper. Accordingly, it is submitted that the cited combination of patents does not suggest the invention as claimed, and withdrawal of the obviousness ground of rejection is respectfully requested.

It is believed that the application is in proper condition for allowance. Early notice to this effect is earnestly solicited.

Respectfully submitted,

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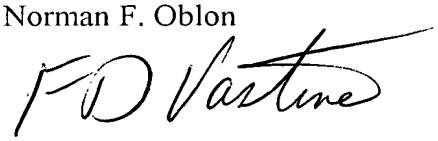

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